

# Pest Update (September 19, 2012)

Vol. 10, no. 27

John Ball, Forest Health Specialist SD Department of Agriculture,  
Extension Forester SD Cooperative Extension

Email: [john.ball@sdstate.edu](mailto:john.ball@sdstate.edu)

Phone: 605-688-4737

Samples sent to: John Ball  
Plant Science Department  
rm 230, Agriculture Hall, Box 2207A  
South Dakota State University  
Brookings, SD 57007-0996

Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem. **Walnut samples may not be sent in from any location – please provide a picture!**

## Available on the net at:

<http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx>

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions and the label is the final authority for a product's use on a particular pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such but it is the reader's responsibility to determine if they can legally apply any product identified in this publication.

## In this issue

pg

### Current concerns

Autumn color change.....	2
Pines and spruce needles turning color.....	2
Water now to improve winter survival.....	3

### E-samples

Cooley spruce gall adelgid.....	3
---------------------------------	---

### Samples received

Brown County (maple bladder gall mite).....	3
Grant County (common buckthorn identification).....	4
Minnehaha County (mulberry identification).....	4
Perkins County (spruce herbicide injury).....	4
Roberts County (walnut identification).....	4
Tripp County (spruce spider mite).....	5
Tripp County (saltcedar identification).....	5

## Autumn foliage color



**Fall color is just near its peak in eastern South Dakota.** The trigger for fall color is the decreasing day lengths followed by cold night temperatures. These are the cues trees used to begin the process of acclimating or preparing for winter. As part of this process deciduous trees begin to shed their leaves. Leaves do not just fall; they first develop an abscission layer at the base of the petiole (the leaf stalk).

This abscission layer is formed by two layers of cells, a separation layer of thin walled cells that eventually break allowing the leaf to fall and a protective layer on the stem side of thick corky cells to seal the abscission point and prevent pathogens from entering.

This corky layer of cells also slows the movement of water and elements into the leaf and also restricts the movement of sugars out of the leaf. This biological roadblock affects the development of the two main fall color groups, the reds and the yellows. Yellow pigments, primarily carotenoids but also lycopenes that are always present in the leaf but are masked by the green chlorophyll.



As chlorophyll begins to break down in the fall with the restriction of water and elements the yellow begin to show through as seen in the picture of the Sweet birch above. The reds are due to the formation of anthocyanin. They result from the buildup of sugars in the leaf and these results in the bright reds seen in the sugar maple picture at the top of this article

Fall color is at its best when we have a combination of sunny, mild days and cool – but not freezing – nights. Freezes can result in leaf browning rather than coloring and excessive rains in the fall reduce the warm sunny weather important in the formation of sugars. That is not an issue this year but the color might be less due to the dry weather causing leaves to drop before the color fully develops.

**Pines and spruce also have an autumn color change.** At this time of year pines have their three-year old needles turn yellow and drop, with spruce it is



their five to seven year old needles. This color change and shedding is sometimes greeted with alarm by homeowners who believe their tree is dying when it is just a normal seasonal process. This year the color is even more noticeable as the dry, sunny weather seems to make the older foliage turn almost a straw yellow before it is shed.



**Fall is upon us and we need to be thinking of winter.** Remember now is the time to be watering your trees, not just before the soil freezes. We have not had sufficient rains in much of the state this late summer and if you are in an area that has not received at least 3 inches of precipitation in the last month you may want to begin watering the trees, particularly the young, newly planted ones. I have received a lot of conifer samples that

have the symptoms of drought-stress and my field visits in West River locations certainly indicate the trees are dry. Watering now is the best way to reduce winter-burn and winter-kill. I expect there will be a lot of re-plants in windbreaks next spring if we have another open, dry winter.

## E-samples

**I got this great picture of damage from the Cooley spruce gall adelgid.** This



insect produces a pineapple-shaped gall on the tips of spruce branches. The female lays the eggs on the spruce tips and the feeding by the young nymphs cause cell-like compartments to form around each of the young insect and the aggregation of these cells create the pineapple-shaped growth. This is not a common problem in South Dakota but I have seen both Black Hills and blue spruce with these galls in the Black Hills and occasionally in some East

River cities such as Webster.

## Samples received

Brown County  
**maple leaves?**

**What are these “bump” on the silver**

This is the maple bladder gall mite. The galls may look unsightly but they actually do very little harm to the tree. In fact a leaf can be 95% covered by the



galls and still be fairly efficient at manufacturing food. No control is recommended.

Grant County

### **What is this tree?**

This is a buckthorn (*Rhamnus cathartica*), a very common sample (get about 10 or 15 a year). It produces purplish-black fruit that remains on the trees into the fall.

Minnehaha County

### **Can you identify this tree for me?**



You bet, this is a leaf from the white mulberry (*Morus alba*), an introduced tree from Russia that is common throughout the state. It may produce a small dark raspberry-like fruit in the summer; however, since mulberries are either male or female it is possible to have a tree that never has any fruit. The different leaf shapes, which can occur on the same tree, seem to puzzle folks and mulberry identification is one of the most common late summer-autumn requests.

Perkins County  
**spruce?**

### **What is wrong with these Black Hills**

The trees are certainly suffering from the heat and drought with many of the needles now exhibiting yellow tips and shedding prematurely. However, the tips of the new shoots are curled and twisted and I see these symptoms associated with spray drift (an application made in the spring when the shoots are forming).

Roberts County

### **Are these edible walnuts?**



Yes, these are the nuts of black walnut (*Juglans nigra*). The nuts ripen in September. A ripe nut usually is about 2-inches in diameter, yellowish green and can be slightly indented with a fingernail. You can harvest them from the tree or wait until they fall (but you'll have to beat the squirrels). Remove the outer skin or husk (NOTE: this is messy. Walnut husks produce a black stain that is near impossible to get off, wear old clothes, and better borrow old

clothes from neighbor.) You'll probably need a hammer to remove the husk – don't try driving over them in a car. Once the husk is completely removed wash the nuts then placed them in a shaded location on a screen to dry and cure for several weeks. The nuts can then be stored in the shell at about 60°F or lower in a mesh bag until used.

Tripp County

**What is wrong with these two spruces? They have browning and falling needles.**

This is one of those instances where spruce spider mite is the problem. The best time to control this cool season mite is when maples begin to turn color in the fall, about a week or two from now. Horticultural oils such as Sunspray are the best for homeowner use, do two applications about 10 days apart (note: oil will take the blue off of a blue spruce). A better approach is to contact a commercial tree spraying company. They have more effective products available.

**Is this salt cedar? They have had the shrub in their yard for 50 years and never seen any salt build-up nor had any problems growing flowers beneath it.**

Yes this is the salt cedar or tamarisk (*Tamarix*). This has been planted as an ornamental in South Dakota, and for erosion control throughout the west, for more than one hundred years (introduced from Asia or Europe) with little problem until recently. No one is certain why the plant has now begun to become invasive, crowding out the native vegetation but it is becoming a weed throughout the west. The state is no longer allowing planting of any tamarisk.